

acg gcc ggc agc tgc ctg cgc aag ttc agc aca atg ccc ttc ctg ttc Thr Ala Gly Ser Cys Leu Arg Lys Phe Ser Thr Met Pro Phe Leu Phe	192
50 55 60	
tgc aat att aac aac gtg tgc aac ttt gca tca cga aat gac tac tcg Cys Asn Ile Asn Asn Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser	240
65 70 75 80	
tac tgg ctg tcc acc cct gag ccc atg ccc atg tca atg gca ccc atc Tyr Trp Leu Ser Thr Pro Glu Pro Met Pro Met Ser Met Ala Pro Ile	288
85 90 95	
acg ggg gaa aac ata aga cca ttt att agt agg tgt gct gtg tgt gag Thr Gly Glu Asn Ile Arg Pro Phe Ile Ser Arg Cys Ala Val Cys Glu	336
100 105 110	
gcg cct gcc atg gtg atg gcc gtg cac agc cag acc att cag atc cca Ala Pro Ala Met Val Met Ala Val His Ser Gln Thr Ile Gln Ile Pro	384
115 120 125	
ccg tgc ccc agc ggg tgg tcc tcg ctg tgg atc ggc tac tct ttt gtg Pro Cys Pro Ser Gly Trp Ser Ser Leu Trp Ile Gly Tyr Ser Phe Val	432
130 135 140	
atg cac acc agc gct ggt gca gaa ggc tct ggc caa gcc ctg gcg tcc Met His Thr Ser Ala Gly Ala Glu Gly Ser Gly Gln Ala Leu Ala Ser	480
145 150 155 160	
ccc ggc tcc tgc ctg gag gag ttt aga agt gcg cca ttc atc gag tgt Pro Gly Ser Cys Leu Glu Glu Phe Arg Ser Ala Pro Phe Ile Glu Cys	528
165 170 175	
cac ggc cgt ggg acc tgc aat tac tac gca aac gct tac agc ttt tgg His Gly Arg Gly Thr Cys Asn Tyr Tyr Ala Asn Ala Tyr Ser Phe Trp	576
180 185 190	
ctc gcc acc ata gag agg agc gag atg ttc aag aag cct acg ccg tcc Leu Ala Thr Ile Glu Arg Ser Glu Met Phe Lys Lys Pro Thr Pro Ser	624
195 200 205	
acc ttg aag gca ggg gag ctg cgc acg cac gtc agc cgc tgc caa gtc Thr Leu Lys Ala Gly Glu Leu Arg Thr His Val Ser Arg Cys Gln Val	672
210 215 220	
tgt atg aga aga aca taa Cys Met Arg Arg Thr	690
225	

<210> 2
<211> 229
<212> PRT
<213> Homo sapiens

<400> 2
Ser Val Asp His Gly Phe Leu Val Thr Arg His Ser Gln Thr Ile Asp
1 5 10 15
Asp Pro Gln Cys Pro Ser Gly Thr Lys Ile Leu Tyr His Gly Tyr Ser
20 25 30

Leu Leu Tyr Val Gln Gly Asn Glu Arg Ala His Gly Gln Asp Leu Gly
 35 40 45
 Thr Ala Gly Ser Cys Leu Arg Lys Phe Ser Thr Met Pro Phe Leu Phe
 50 55 60
 Cys Asn Ile Asn Asn Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser
 65 70 75 80
 Tyr Trp Leu Ser Thr Pro Glu Pro Met Pro Met Ser Met Ala Pro Ile
 85 90 95
 Thr Gly Glu Asn Ile Arg Pro Phe Ile Ser Arg Cys Ala Val Cys Glu
 100 105 110
 Ala Pro Ala Met Val Met Ala Val His Ser Gln Thr Ile Gln Ile Pro
 115 120 125
 Pro Cys Pro Ser Gly Trp Ser Ser Leu Trp Ile Gly Tyr Ser Phe Val
 130 135 140
 Met His Thr Ser Ala Gly Ala Glu Gly Ser Gly Gln Ala Leu Ala Ser
 145 150 155 160
 Pro Gly Ser Cys Leu Glu Glu Phe Arg Ser Ala Pro Phe Ile Glu Cys
 165 170 175
 His Gly Arg Gly Thr Cys Asn Tyr Tyr Ala Asn Ala Tyr Ser Phe Trp
 180 185 190
 Leu Ala Thr Ile Glu Arg Ser Glu Met Phe Lys Lys Pro Thr Pro Ser
 195 200 205
 Thr Leu Lys Ala Gly Glu Leu Arg Thr His Val Ser Arg Cys Gln Val
 210 215 220
 Cys Met Arg Arg Thr
 225
 <210> 3
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> pET22b(+) forward oligonucleotide primer for
 Arresten

<400> 3
 cgggatcctt ctgttgatca cggcttc

27

<210> 4
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> pET22b(+) reverse oligonucleotide primer for
 Arresten

<400> 4
 cccaaagcttt gttcttctca tacagac

27

<210> 5
 <211> 684
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(681)

<400> 5
 gtc agc atc ggc tac ctc ctg gtg aag cac agc cag acg gac cag gag 48
 Val Ser Ile Gly Tyr Leu Leu Val Lys His Ser Gln Thr Asp Gln Glu
 1 5 10 15

ccc atg tgc ccg gtg ggc atg aac aaa ctc tgg agt gga tac agc ctg 96
 Pro Met Cys Pro Val Gly Met Asn Lys Leu Trp Ser Gly Tyr Ser Leu
 20 25 30

ctg tac ttc gag ggc cag gag aag gcg cac aac cag gac ctg ggg ctg 144
 Leu Tyr Phe Glu Gly Gln Glu Lys Ala His Asn Gln Asp Leu Gly Leu
 35 40 45

gcg ggc tcc tgc ctg gcg cggttcc agc acc atg ccc ttc ctg tac tgc 192
 Ala Gly Ser Cys Leu Ala Arg Phe Ser Thr Met Pro Phe Leu Tyr Cys
 50 55 60

aac cct ggt gat gtc tgc tac tat gcc agc cgg aac gac aag tcc tac 240
 Asn Pro Gly Asp Val Cys Tyr Tyr Ala Ser Arg Asn Asp Lys Ser Tyr
 65 70 75 80

tgg ctc tct acc act gcg ccg ctg ccc atg atg ccc gtg gcc gag gac 288
 Trp Leu Ser Thr Thr Ala Pro Leu Pro Met Met Pro Val Ala Glu Asp
 85 90 95

gag atc aag ccc tac atc agc cgc tgt tct gtg tgt gag gcc ccg gcc 336
 Glu Ile Lys Pro Tyr Ile Ser Arg Cys Ser Val Cys Glu Ala Pro Ala
 100 105 110

atc gcc atc gcg gtc cac agt cag gat gtc tcc atc cca cac tgc cca 384
 Ile Ala Ile Ala Val His Ser Gln Asp Val Ser Ile Pro His Cys Pro
 115 120 125

gct ggg tgg cgg agt ttg tgg atc gga tat tcc ttc ctc atg cac acg 432
 Ala Gly Trp Arg Ser Leu Trp Ile Gly Tyr Ser Phe Leu Met His Thr
 130 135 140

gcg gcg gga gac gaa ggc ggt ggc caa tca ctg gtg tca ccg ggc agc 480
 Ala Ala Gly Asp Glu Gly Gly Gln Ser Leu Val Ser Pro Gly Ser
 145 150 155 160

tgt cta gag gac ttc cgc gcc aca cca ttc atc gaa tgc aat gga ggc 528
 Cys Leu Glu Asp Phe Arg Ala Thr Pro Phe Ile Glu Cys Asn Gly Gly
 165 170 175

cgc ggc acc tgc cac tac tac gcc aac aag tac agc ttc tgg ctg acc 576
 Arg Gly Thr Cys His Tyr Tyr Ala Asn Lys Tyr Ser Phe Trp Leu Thr
 180 185 190

acc att ccc gag cag agc ttc cag ggc tcg ccc tcc gcc gac acg ctc 624
 Thr Ile Pro Glu Gln Ser Phe Gln Gly Ser Pro Ser Ala Asp Thr Leu
 195 200 205

aag gcc ggc ctc atc cgc aca cac atc agc cgc tgc cag gtg tgc atg 672
 Lys Ala Gly Leu Ile Arg Thr His Ile Ser Arg Cys Gln Val Cys Met
 210 215 220

aag aac ctg tga 684
 Lys Asn Leu

225

<210> 6
<211> 227
<212> PRT
<213> Homo sapiens

<400> 6
Val Ser Ile Gly Tyr Leu Leu Val Lys His Ser Gln Thr Asp Gln Glu
1 5 10 15
Pro Met Cys Pro Val Gly Met Asn Lys Leu Trp Ser Gly Tyr Ser Leu
20 25 30
Leu Tyr Phe Glu Gly Gln Glu Lys Ala His Asn Gln Asp Leu Gly Leu
35 40 45
Ala Gly Ser Cys Leu Ala Arg Phe Ser Thr Met Pro Phe Leu Tyr Cys
50 55 60
Asn Pro Gly Asp Val Cys Tyr Tyr Ala Ser Arg Asn Asp Lys Ser Tyr
65 70 75 80
Trp Leu Ser Thr Thr Ala Pro Leu Pro Met Met Pro Val Ala Glu Asp
85 90 95
Glu Ile Lys Pro Tyr Ile Ser Arg Cys Ser Val Cys Glu Ala Pro Ala
100 105 110
Ile Ala Ile Ala Val His Ser Gln Asp Val Ser Ile Pro His Cys Pro
115 120 125
Ala Gly Trp Arg Ser Leu Trp Ile Gly Tyr Ser Phe Leu Met His Thr
130 135 140
Ala Ala Gly Asp Glu Gly Gly Gln Ser Leu Val Ser Pro Gly Ser
145 150 155 160
Cys Leu Glu Asp Phe Arg Ala Thr Pro Phe Ile Glu Cys Asn Gly Gly
165 170 175
Arg Gly Thr Cys His Tyr Tyr Ala Asn Lys Tyr Ser Phe Trp Leu Thr
180 185 190
Thr Ile Pro Glu Gln Ser Phe Gln Gly Ser Pro Ser Ala Asp Thr Leu
195 200 205
Lys Ala Gly Leu Ile Arg Thr His Ile Ser Arg Cys Gln Val Cys Met
210 215 220
Lys Asn Leu

225
<210> 7
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> pET22b(+) forward oligonucleotide primer for
Canstatin

<400> 7
cgggatcctg tcagcatcggttacactc

27

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> pET22b(+) reverse oligonucleotide primer for
Canstatin

<400> 8
cccaagcttc aggttcttca tgcacac

27

<210> 9
<211> 738
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1) ... (735)

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<400> 9
cca ggt ttg aaa gga aaa cgt gga gac agt gga tca cct gca acc tgg 48
Pro Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp
   1           5           10          15

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aca acg aga ggc ttt gtc ttc acc cga cac agt caa acc aca gca att 96
Thr Thr Arg Gly Phe Val Phe Thr Arg His Ser Gln Thr Thr Ala Ile
          20           25           30

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cct tca tgt cca gag ggg aca gtg cca ctc tac agt ggg ttt tct ttt 144
 Pro Ser Cys Pro Glu Gly Thr Val Pro Leu Tyr Ser Gly Phe Ser Phe
 35 40 45

ctt ttt gta caa gga aat caa cga gcc cac gga caa gac ctt gga act 192
 Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr
 50 55 60

ctt ggc agc tgc ctg cag cga ttt acc aca atg cca ttc tta ttc tgc 240
 Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys
 65 70 75 80

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aat gtc aat gat gta tgt aat ttt gca tct cga aat gat tat tca tac      288
Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr
          85           90           95

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tgg ctg tca aca cca gct ctg atg cca atg aac atg gct ccc att act    336
Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr
          100           105           110

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ggc aga gcc ctt gag cct tat ata agc aga tgc act gtt tgt gaa ggt 384
 Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly
 115 120 125

```
cct gcg atc gcc ata gcc gtt cac agc caa acc act gac att cct cca      432
Pro Ala Ile Ala Ile Ala Val His Ser Gln Thr Thr Asp Ile Pro Pro
          130      135      140
```

tgt cct cac ggc tgg att tct ctc tgg aaa gga ttt tca ttc atc atg 480
Cys Pro His Gly Trp Ile Ser Leu Trp Lys Gly Phe Ser Phe Ile Met
145 150 155 160

```
ggc tcc tgc ctg gaa gaa ttc cga gcc agc cca ttt cta gaa tgt cat      576
Gly Ser Cys Leu Glu Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His
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180

185

190

gga aga gga acg tgc aac tac tat tca aat tcc tac agt ttc tgg ctg
 Gly Arg Gly Thr Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu
 195 200 205 624

gct tca tta aac cca gaa aga atg ttc aga aag cct att cca tca act
 Ala Ser Leu Asn Pro Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr
 210 215 220 672

gtg aaa gct ggg gaa tta gaa aaa ata ata agt cgc tgt cag gtg tgc
 Val Lys Ala Gly Glu Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys
 225 230 235 240 720

atg aag aaa aga cac tga
 Met Lys Lys Arg His
 245 738

<210> 10
<211> 245
<212> PRT
<213> Homo sapiens

<400> 10
 Pro Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp
 1 5 10 15
 Thr Thr Arg Gly Phe Val Phe Thr Arg His Ser Gln Thr Thr Ala Ile
 20 25 30
 Pro Ser Cys Pro Glu Gly Thr Val Pro Leu Tyr Ser Gly Phe Ser Phe
 35 40 45
 Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr
 50 55 60
 Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys
 65 70 75 80
 Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr
 85 90 95
 Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr
 100 105 110
 Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly
 115 120 125
 Pro Ala Ile Ala Ile Ala Val His Ser Gln Thr Thr Asp Ile Pro Pro
 130 135 140
 Cys Pro His Gly Trp Ile Ser Leu Trp Lys Gly Phe Ser Phe Ile Met
 145 150 155 160
 Phe Thr Ser Ala Gly Ser Glu Gly Thr Gly Gln Ala Leu Ala Ser Pro
 165 170 175
 Gly Ser Cys Leu Glu Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His
 180 185 190
 Gly Arg Gly Thr Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu
 195 200 205
 Ala Ser Leu Asn Pro Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr
 210 215 220
 Val Lys Ala Gly Glu Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys
 225 230 235 240
 Met Lys Lys Arg His
 245

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<210> 11
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> pET22b(+) forward oligonucleotide primer for
      Tumstatin

<400> 11
cgggatccgg gtttcaaagg aaaacgt                                27

<210> 12
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> pET22b(+) reverse oligonucleotide primer for
      Tumstatin

<400> 12
cccaagcttt cagtgtcttt tcttcat                                27

<210> 13
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Additional vector sequence added to protein

<400> 13
Met Asp Ile Gly Ile Asn Ser Asp
  1           5
<210> 14
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Additional vector sequence added to protein

<400> 14
Lys Leu Ala Ala Ala Leu Glu
  1           5
<210> 15
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> pPICZaA forward oligonucleotide primer for
      Arresten

<400> 15
ttcgaaattc tctgttgatc acggcttc                                28

<210> 16

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<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> pPICZaA reverse oligonucleotide primer for
Arresten

<400> 16
tgctctagag gtgttcttct catacagact tggca

35

<210> 17
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> pPICZaA forward oligonucleotide primer for
Canstatin

<400> 17
ttcggattc gtcagcatcg gctacacct g

31

<210> 18
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> pPICZaA reverse oligonucleotide primer for
Canstatin

<400> 18
ggggtacccc caggttcttc atgcacacct gg

32

<210> 19
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<223> Tumstatin (amino acids 1-244)

<400> 19
Pro Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp
1 5 10 15
Thr Thr Arg Gly Phe Val Phe Thr Arg His Ser Gln Thr Thr Ala Ile
20 25 30
Pro Ser Cys Pro Glu Gly Thr Val Pro Leu Tyr Ser Gly Phe Ser Phe
35 40 45
Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr
50 55 60
Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys
65 70 75 80
Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr
85 90 95
Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr
100 105 110
Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly

115	120	125
Pro Ala Ile Ala Ile Ala Val His Ser Gln Thr Thr Asp Ile Pro Pro		
130	135	140
Cys Pro His Gly Trp Ile Ser Leu Trp Lys Gly Phe Ser Phe Ile Met		
145	150	155
Phe Thr Ser Ala Gly Ser Glu Gly Thr Gly Gln Ala Leu Ala Ser Pro		160
165	170	175
Gly Ser Cys Leu Glu Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His		
180	185	190
Gly Arg Gly Thr Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu		
195	200	205
Ala Ser Leu Asn Pro Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr		
210	215	220
Val Lys Ala Gly Glu Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys		
225	230	235
Met Lys Lys Arg		240

<210> 20
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Tumstatin 333 (amino acids 2-125 of SEQ ID NO:10)

<400> 20			
Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp Thr			
1	5	10	15
Thr Arg Gly Phe Val Phe Thr Arg His Ser Gln Thr Thr Ala Ile Pro			
20	25	30	
Ser Cys Pro Glu Gly Thr Val Pro Leu Tyr Ser Gly Phe Ser Phe Leu			
35	40	45	
Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr Leu			
50	55	60	
Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys Asn			
65	70	75	80
Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr Trp			
85	90	95	
Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr Gly			
100	105	110	
Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr Val			
115	120		

<210> 21
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Tumstatin 334 (amino acids 126-244 of SEQ ID NO:10)

<400> 21			
Cys Glu Gly Pro Ala Ile Ala Ile Val His Ser Gln Thr Thr Asp			
1	5	10	15
Ile Pro Pro Cys Pro His Gly Trp Ile Ser Leu Trp Lys Gly Phe Ser			

20	25	30
Phe Ile Met Phe Thr Ser Ala Gly Ser Glu Gly Thr Gly Gln Ala Leu		
35	40	45
Ala Ser Pro Gly Ser Cys Leu Glu Glu Phe Arg Ala Ser Pro Phe Leu		
50	55	60
Glu Cys His Gly Arg Gly Thr Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser		
65	70	75
Phe Trp Leu Ala Ser Leu Asn Pro Glu Arg Met Phe Arg Lys Pro Ile		80
85	90	95
Pro Ser Thr Val Lys Ala Gly Glu Leu Glu Lys Ile Ile Ser Arg Cys		
100	105	110
Gln Val Cys Met Lys Lys Arg		
115		

<210> 22
<211> 191
<212> PRT
<213> Artificial Sequence

<220>
<223> Tum-1 (Tumstatin N53) (amino acids 54-244 of SEQ ID NO:10)

<400> 22		
Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr Leu Gly Ser Cys Leu		
1	5	10
Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys Asn Val Asn Asp Val		15
20	25	30
Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr Trp Leu Ser Thr Pro		
35	40	45
Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr Gly Arg Ala Leu Glu		
50	55	60
Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly Pro Ala Ile Ala Ile		
65	70	75
Ala Val His Ser Gln Thr Thr Asp Ile Pro Pro Cys Pro His Gly Trp		80
85	90	95
Ile Ser Leu Trp Lys Gly Phe Ser Phe Ile Met Phe Thr Ser Ala Gly		
100	105	110
Ser Glu Gly Thr Gly Gln Ala Leu Ala Ser Pro Gly Ser Cys Leu Glu		
115	120	125
Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His Gly Arg Gly Thr Cys		
130	135	140
Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu Ala Ser Leu Asn Pro		
145	150	155
Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr Val Lys Ala Gly Glu		160
165	170	175
Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys Met Lys Lys Arg		
180	185	190

<210> 23
<211> 132
<212> PRT
<213> Artificial Sequence

<220>
<223> Tum-2 (amino acids 1-132 of SEQ ID NO:10)

<400> 23

Pro Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp
 1 5 10 15
 Thr Thr Arg Gly Phe Val Phe Thr Arg His Ser Gln Thr Thr Ala Ile
 20 25 30
 Pro Ser Cys Pro Glu Gly Thr Val Pro Leu Tyr Ser Gly Phe Ser Phe
 35 40 45
 Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr
 50 55 60
 Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys
 65 70 75 80
 Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr
 85 90 95
 Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr
 100 105 110
 Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly
 115 120 125
 Pro Ala Ile Ala
 130

<210> 24

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> Tum-3 (amino acids 133-244 of SEQ ID NO:10)

<400> 24

Ile Ala Val His Ser Gln Thr Thr Asp Ile Pro Pro Cys Pro His Gly
 1 5 10 15
 Trp Ile Ser Leu Trp Lys Gly Phe Ser Phe Ile Met Phe Thr Ser Ala
 20 25 30
 Gly Ser Glu Gly Thr Gly Gln Ala Leu Ala Ser Pro Gly Ser Cys Leu
 35 40 45
 Glu Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His Gly Arg Gly Thr
 50 55 60
 Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu Ala Ser Leu Asn
 65 70 75 80
 Pro Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr Val Lys Ala Gly
 85 90 95
 Glu Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys Met Lys Lys Arg
 100 105 110

<210> 25

<211> 64

<212> PRT

<213> Artificial Sequence

<220>

<223> Tum-4 (amino acids 181-244 of SEQ ID NO:10)

<400> 25

Glu Glu Phe Arg Ala Ser Pro Phe Leu Glu Cys His Gly Arg Gly Thr
 1 5 10 15
 Cys Asn Tyr Tyr Ser Asn Ser Tyr Ser Phe Trp Leu Ala Ser Leu Asn
 20 25 30

Pro Glu Arg Met Phe Arg Lys Pro Ile Pro Ser Thr Val Lys Ala Gly
 35 40 45
 Glu Leu Glu Lys Ile Ile Ser Arg Cys Gln Val Cys Met Lys Lys Arg
 50 55 60

<210> 26
<211> 79
<212> PRT
<213> Artificial Sequence

<220>
<223> Tum-5 (amino acids 54-132 of SEQ ID NO:10)

<400> 26
Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr Leu Gly Ser Cys Leu
 1 5 10 15
Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Cys Asn Val Asn Asp Val
 20 25 30
Cys Asn Phe Ala Ser Arg Asn Asp Tyr Ser Tyr Trp Leu Ser Thr Pro
 35 40 45
Ala Leu Met Pro Met Asn Met Ala Pro Ile Thr Gly Arg Ala Leu Glu
 50 55 60
Pro Tyr Ile Ser Arg Cys Thr Val Cys Glu Gly Pro Ala Ile Ala
 65 70 75

<210> 27
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> T1 (amino acids 1-20 of SEQ ID NO:10)

<400> 27
Pro Gly Leu Lys Gly Lys Arg Gly Asp Ser Gly Ser Pro Ala Thr Trp
 1 5 10 15
Thr Thr Arg Gly
 20

<210> 28
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> T2 (amino acids 54-73 of SEQ ID NO:10)

<400> 28
Asn Gln Arg Ala His Gly Gln Asp Leu Gly Thr Leu Gly Ser Cys Leu
 1 5 10 15
Gln Arg Phe Thr
 20

<210> 29
<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> T3 (amino acids 69-88 of SEQ ID NO:10)

<400> 29

Leu	Gln	Arg	Phe	Thr	Thr	Met	Pro	Phe	Leu	Phe	Cys	Asn	Val	Asn	Asp
1						5			10					15	
Val	Cys	Asn	Phe												20

<210> 30

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> T4 (amino acids 84-103 of SEQ ID NO:10)

<400> 30

Asp	Val	Cys	Asn	Phe	Ala	Ser	Arg	Asn	Asp	Tyr	Ser	Tyr	Trp	Leu	Ser
1					5				10					15	
Thr	Pro	Ala	Leu												20

<210> 31

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> T5 (amino acids 99-117 of SEQ ID NO:10)

<400> 31

Ser	Thr	Pro	Ala	Leu	Met	Pro	Met	Asn	Met	Ala	Pro	Ile	Thr	Gly	Arg
1					5				10					15	
Ala	Leu	Glu													

<210> 32

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> T6 (amino acids 114-132 of SEQ ID NO:10)

<400> 32

Arg	Ala	Leu	Glu	Pro	Tyr	Ile	Ser	Arg	Cys	Thr	Val	Cys	Glu	Gly	Pro
1					5				10				15		
Ala	Ile	Ala													

<210> 33

<211> 88
<212> PRT
<213> Artificial Sequence

<220>
<223> Tumstatin-45-132 (amino acids 45-132 of SEQ ID NO:10)

<400> 33
Gly Phe Ser Phe Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln
1 5 10 15
Asp Leu Gly Thr Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro
20 25 30
Phe Leu Phe Cys Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn
35 40 45
Asp Tyr Ser Tyr Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met
50 55 60
Ala Pro Ile Thr Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr
65 70 75 80
Val Cys Glu Gly Pro Ala Ile Ala
85

<210> 34
<211> 88
<212> PRT
<213> Artificial Sequence

<220>
<223> Tumstatin-5-126-C-A (amino acids 45-132 of SEQ ID NO:10; alanine has been substituted for the cysteine residue at position 126 of the full-length Tumstatin molecule)

<400> 34
Gly Phe Ser Phe Leu Phe Val Gln Gly Asn Gln Arg Ala His Gly Gln
1 5 10 15
Asp Leu Gly Thr Leu Gly Ser Cys Leu Gln Arg Phe Thr Thr Met Pro
20 25 30
Phe Leu Phe Cys Asn Val Asn Asp Val Cys Asn Phe Ala Ser Arg Asn
35 40 45
Asp Tyr Ser Tyr Trp Leu Ser Thr Pro Ala Leu Met Pro Met Asn Met
50 55 60
Ala Pro Ile Thr Gly Arg Ala Leu Glu Pro Tyr Ile Ser Arg Cys Thr
65 70 75 80
Val Ala Glu Gly Pro Ala Ile Ala
85

<210> 35
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic blocking peptide

<400> 35
Cys Asp Cys Arg Gly Asp Cys Phe Cys

1 5

<210> 36
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic blocking peptide

<400> 36
Cys Asn Gly Arg Cys
1 5

<210> 37
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> T7 (amino acids 74-98 of SEQ ID NO:10)

<400> 37
Thr Met Pro Phe Leu Phe Cys Asn Val Asn Asp Val Cys Asn Phe Ala
1 5 10 15
Ser Arg Asn Asp Tyr Ser Tyr Trp Leu
20 25

<210> 38
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> T7-mutant (amino acids 74-98 of SEQ ID NO:10;
methionine has been substituted for the leucine
residue at position 78 of the full-length
Tumstatin molecule, and isoleucine has been
substituted for valine at position 82, and
asparagine has been substituted for aspartic acid
at position 84)

<400> 38
Thr Met Pro Phe Met Phe Cys Asn Ile Asn Asn Val Cys Asn Phe Ala
1 5 10 15
Ser Arg Asn Asp Tyr Ser Tyr Trp Leu
20 25

<210> 39
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> T8 (amino acids 69-95 of SEQ ID NO:10; lysine has

been substituted for the leucine residue at
position 69 of the full-length Tumstatin molecule)

<400> 39

Lys	Gln	Arg	Phe	Thr	Thr	Met	Pro	Phe	Leu	Phe	Cys	Asn	Val	Asn	Asp
1				5					10					15	
Val	Cys	Asn	Phe	Ala	Ser	Arg	Asn	Asp	Tyr	Ser					
			20					25							

<210> 40

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> T8-3 (amino acids 69-95 of SEQ ID NO:10; lysine
has been substituted for the leucine residue at
position 69 of the full-length Tumstatin molecule,
and serine has been substituted for the cysteine
residues at positions 80 and 86)

<400> 40

Lys	Gln	Arg	Phe	Thr	Thr	Met	Pro	Phe	Leu	Phe	Ser	Asn	Val	Asn	Asp
1				5					10					15	
Val	Ser	Asn	Phe	Ala	Ser	Arg	Asn	Asp	Tyr	Ser					
			20					25							

<210> 41

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> TP3 (amino acids 77-95 of SEQ ID NO:10; lysine has
been substituted for the phenylalanine residue at
position 77 of the full-length Tumstatin molecule,
and cysteine has been substituted for the aspartic
acid at position 84)

<400> 41

Lys	Leu	Phe	Cys	Asn	Val	Asn	Cys	Val	Cys	Asn	Phe	Ala	Ser	Arg	Asn
1				5					10					15	
Asp	Tyr	Ser													

<210> 42

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> P2 (amino acids 69-95 of SEQ ID NO:10; lysine has
been substituted for the leucine residue at
position 69 of the full-length Tumstatin molecule,
and aspartic acid has been substituted for the
cysteine residues at positions 80 and 86)

<400> 42
 Lys Gln Arg Phe Thr Thr Met Pro Phe Leu Phe Asp Asn Val Asn Asp
 1 5 10 15
 Val Asp Asn Phe Ala Ser Arg Asn Asp Tyr Ser
 20 25

<210> 43
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Scrambled peptide SP1

<400> 43
 Ala Asn Met Ser Arg Asn Val Phe Phe Asp Cys Thr Ser Phe Pro Val
 1 5 10 15
 Cys Gln Lys Phe Leu Asn Asp Thr Arg Asn Tyr
 20 25

<210> 44
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Scrambled peptide SP2

<400> 44
 Thr Phe Asn Cys Val Lys Asn Tyr Gln Arg Leu Asp Phe Thr Ser Arg
 1 5 10 15
 Phe Val Met Asp Ser Cys Ala Asn Phe Pro Asn
 20 25

<210> 45
 <211> 14
 <212> PRT
 <213> rtificial Sequence

<220>
 <223> Generic peptide

<223> X at position 1 is a hydrogen or a peptidyl chain
 of 1 to 17 amino acids

<223> X at position 2 is F or K

<223> X at position 5 is C, S or D

<223> X at position 9 is D or C

<223> X at position 11 is C, S or D

<223> X at position 14 is a hydrogen or a peptidyl chain
 of 1 to 12 amino acids

<400> 45
Xaa Xaa Leu Phe Xaa Asn Val Asn Xaa Val Xaa Asn Phe Xaa
1 5 10

<210> 46
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 46
Thr Thr Met Pro
1

<210> 47
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 47
Phe Thr Thr Met Pro
1 5

<210> 48
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 48
Arg Phe Thr Thr Met Pro
1 5

<210> 49
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 49
Gln Arg Phe Thr Thr Met Pro
1 5

<210> 50
<211> 8

<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 50
Leu Gln Arg Phe Thr Thr Met Pro
1 5

<210> 51
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 51

Lys Gln Arg Phe Thr Thr Met Pro
1 5

<210> 52
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 52

Ala Ser Arg Asn
1

<210> 53
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 53
Ala Ser Arg Asn Asp
1 5

<210> 54
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 54

Ala Ser Arg Asn Asp Tyr
1 5

<210> 55
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 55
Ala Ser Arg Asn Asp Tyr Ser
1 5

<210> 56
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 56
Ala Ser Arg Asn Asp Tyr Ser Tyr
1 5

<210> 57
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 57
Ala Ser Arg Asn Asp Tyr Asp Tyr Trp
1 5

<210> 58
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Generic peptide

<400> 58
Ala Ser Arg Asn Asp Tyr Ser Tyr Trp Leu
1 5 10